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Cellphone Payments Offer Alternative to Cash

By **CLAIRE GAIN MILLER** and **NICK BILTON**

You win a bet, but the loser does not have enough cash on him to settle it. If he has a credit card, and most people usually do, there is finally a solution. A number of big and small companies — including eBay's PayPal unit, Intuit, VeriFone and Square — are creating innovative ways for individuals to avoid cash and checks and settle all debts, public and private, using their cellphones.

Several of the companies have developed small credit card scanners that plug into a cellphone and for a small fee enable any individual or small business to turn a phone into a credit card processing terminal. PayPal's cellphone app calls for only a simple bump of two cellphones to transfer money. Apple has submitted a patent application for a cellphone payment system.

Brian Kusler, 40, a software engineer, is already helping dollar bills join Susan B. Anthony coins as collector's items. After he polished off grilled lamb and zinfandel at a San Francisco restaurant recently, his dining companion paid the bill and asked him for his share. Instead of hunting down an A.T.M., the two bumped their iPhones together, and Mr. Kusler wirelessly transferred his part of the bill, about \$100.

"I don't carry a lot of cash; I don't think anyone does these days," Mr. Kusler said. "We go out, and I oftentimes have to remember to pay my friends back when we get home, and I want to be able to just do it right there."

There is evidence that paper money is being used less often, according to the Federal Reserve. Though cash payments are difficult to track, the number of noncash transactions in the United States grew from fewer than 250 a person in 1995 to more than 300 in 2006. Data on the stock of small-denomination bills and destroyed bills indicates that the use of cash peaked in the mid-1990s and has been declining since, two economists at the Federal Reserve Bank of Cleveland found.

"When debit cards were introduced in the early '90s, that was the beginning of the slow and gradual decline of paper checks and cash," said Red Gillen, a senior analyst at Celent, a research and consulting firm on technology and financial services, based in Boston.

Still, cash has remained essential in certain instances, like paying back a colleague for lunch,

buying fruit at a farmers' market or buying a beer at a cash-only bar. These new mobile payment technologies could finally change that.

"The problem with cash is that it is tangible, it's inconvenient, you have to carry around a bunch of bills and you have to continually go to the A.T.M.," said Jack Dorsey, a [Twitter](#) co-founder who is now the co-founder and chief executive of Square, which makes a dime-size device that anyone can plug into the earplug jack of an [iPhone](#) or [iPad](#) to instantly accept credit card payments. "If we can make cards more convenient and faster, it can replace a lot of the experiences around cash."

Light wallets are not a problem for [Joe Mangrum](#), a sidewalk sand painter in New York, who has been using Square to take donations from passers-by and sell copies of his book. Sales have increased sharply since he started accepting credit cards on his iPhone, he said. "I've made the sale as opposed to twiddling my thumbs because they don't have the cash."

The new services could have the biggest impact on the smallest businesses, like farm stands or house cleaners, that accept only cash and checks because they do not have stores to house credit card terminals and do not want to enter into complicated, long-term relationships with credit card companies.

Rachel Ancliffe, a [clothing designer](#) in Portland, Ore., sells her dresses and blouses at sample sales and from her home, and uses Intuit GoPayment to process credit card payments.

"You can't accept checks because then you're just kissing your product goodbye" because of fraud and bounced checks, Ms. Ancliffe said. "I sell 10 times more because I take credit cards."

Fraud protection offered by the credit card companies is the same as when the card is used at a cash register. Some of the new companies say security against fraud might even be improved because they provide e-mail receipts, and those from Square include photos and a map of where the transactions were made.

The death of cash has been predicted since the 1970s, when electronic transactions like direct deposit of checks were introduced. But most digital payment experiments, like [one in 2006 by Visa](#), have focused on swiping cellphones, as is popular in countries like Japan, instead of credit cards. Mobile payments have not taken off in the United States [because](#) Americans are just as happy to reach into their pockets for a plastic card as for a cellphone.

Instead of replacing credit cards, technologies like Square and [GoPayment](#) rely on them. Credit card companies stay in the middle, extracting a fee with each swipe or bump.

GoPayment costs \$12.95 a month on top of a per-transaction fee of 30 cents plus 1.7 percent to 3.7 percent of the payment, depending on the credit card companies' rates. Square is free and users pay 15 cents plus 2.75 percent to 3.5 percent of each transaction. It will be available for iPhones

and [iPod](#) Touches in May and for other phones and laptops later.

Exchanging money with friends using PayPal's iPhone app is free if payers use a bank or PayPal account, and costs 30 cents plus 2.9 percent of the transaction for credit cards.

Though people will use cash less, it is not nearly extinct, said Wayne Abernathy, executive vice president for financial institutions policy at the American Bankers Association. "Historically, we have seen more failed innovations in payments than we've seen successful ones, because you have to convince people that it's secure, more efficient and reliable," Mr. Abernathy said.

But a cashless society could become a reality as the younger generation, accustomed to buying music on iTunes and virtual gifts on [Facebook](#), grows up.

"Older people still tend to like to use cash or checks," Mr. Abernathy said. "Younger people don't want to touch a piece of paper. They want to do it all electronically."